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Ichthyocercus manauensis, a new Desmid (Zygnemaphyceae) from Northern Brazil

by

Carlos E. de M. Bicudo

Dr. C. E. de M. Bicudo, Secção de Ficologia, Instituto de Botânica, Caixa postal 4005, BR - 01000 São Paulo - SP, Brazil.

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Abstract

Proposition of a new species of *Ichthyocercus* (Desmidiaceae, Zygnemaphyceae) – *I. manauensis* C. BICUDO, sp. nov. – based on its elongate, slightly cuneate semicells, 1.1 - 1.5 times as long as broad. Material studied was collected from a small, natural pond located in an area of **campina** behind the “Conjunto dos Jornalistas”, in the city of Manaus, State of Amazonas, northern Brazil.

Keywords: *Ichthyocercus*, *I. manauensis* C. BIC., sp. nov., Desmidiaceae, Zygnemaphyceae, Brazil.

Resumo

Trata-se da descrição e da proposição de uma espécie nova de *Ichthyocercus* (Desmidiaceae, Zygnemaphyceae) – *I. manauensis* C. BICUDO – baseando-se em suas semicélulas alongadas, 1,1 - 1,5 vezes mais compridas que largas, e levemente cuneadas. O material estudado provém de uma lagoa natural situada em área de **campina** atrás do “Conjunto dos Jornalistas”, na cidade de Manaus, Estado do Amazonas, norte do Brasil.

The genus *Ichthyocercus* was proposed by WEST & WEST (1897: 80) to accommodate a very intriguing desmid met with in Welwitsch's collections from Angola, Africa. It includes at present just 3 species known solely from the tropics.

This paper is the proposal of a fourth species for the genus: *I. manauensis*, which was collected from a small, natural pond located in an area of *campina* just behind the "Conjunto dos Jornalistas" in the city of Manaus, State of Amazonas, northern Brazil.

Ichthyocercus manauensis C. BICUDO, sp. nov. (Fig. 1 - 2)

Cellulae 2.3 - 2.6 plo longiores quam latae sine spinis, 25.9 - 45.5 x 10.4 - 14.8 μ m, spinae 2 - 4 μ m long. Cellulae paululum sed manifeste constrictae media in parte, sinu obtuse angulari; semicellulae subcuneatae, margines paululum divergentes apices versus, depressionem mediam tenuissimam habentes, necnon margo apicalis depressionem haud profundam habens; omnis angulus spina parva divergente munitus; membrana cellulae grosse punctata, punctis in 9 - 10 seriebus parallelis longitudinalibus dispositis. Zygospora non observata.

Typus: HOLOTYPE, Brasilia, Provincia Amazonas, Manaus, "Conjunto dos Jornalistas", lacus, lectus C. E. M. Bicudo, 27. II. 1985 (SP 187541).

Cells 2.3 - 2.6 times longer than broad without spines, 25.9 - 45.5 x 10.4 - 14.8 μ m, spines 2 - 4 μ m long, slight but conspicuously constricted at the middle, sinus obtuse-angled; semicells slightly cuneate, lateral margins little divergent towards the apex, with a very shallow median depression, apical margin also with a shallow, median depression, each angle tipped with a short, divergent spine; cell-wall coarsely punctate, punctae arranged into 9 - 10 longitudinal, parallel series. Zygospora not observed.

Ichthyocercus angolensis WEST & WEST (WEST & WEST 1897: 80, pl. 368, fig. 26 - 31) has oblong semicells, with slightly convex lateral margins, and the cell-wall finely and uniformly punctate or punctate-scrobiculate. The zygospora is globose to broadly elliptical, with thick, 2-layered wall, the inner layer scrobiculate. *Ichthyocercus longispinus* (BORGE) KRIEGER (KRIEGER 1937: 450, pl. 53, fig. 13 - 15) has semicells which are mostly subcylindrical, widely divergent near the apex, and the cell-wall somewhat coarsely punctate, punctae arranged in transverse, parallel series from the base to near the apex of the semicell, where they are closely and irregularly distributed. The zygospora is globose and smooth-walled. The var. *amazonensis* FÖRSTER ex FÖRSTER (FÖRSTER 1981: 231) of the latter is distinct from the type in that its individuals are about half the size of the type, 2.0 - 3.6 times as long as broad. *Ichthyocercus humbertii* BOURRELLY (BOURRELLY & LÉBOIME 1946: 89, pl. 2, fig. 15 - 17) has the semicells very slight to markedly tapered from base to apex, base slightly but clearly inflated, lateral margins faintly and irregularly undulate or with a slight retuseness right above the basal inflation, and the cell wall punctate, the pores of the apical area of the semicells much more evident. Zygospora not observed.

Ichthyocercus sierra-leonensis WOODHEAD & TWEED (WOODHEAD & TWEED 1958: 184, fig. 1), with semicells almost circular, a strong, solid, fairly long, divergent spine on each angle, and a convex apex which continues the arc of the semicell, is definitely not an *Ichthyocercus*. GAUTHIER-LIÈVRE (1960: 58), judging from WOODHEAD & TWEED's (1958: pl. 1, fig. 1) illustration have already raised the possibility of it being an *Arthrodesmus* species, with which we fully agree.

The present *I. manauensis* C. BIC., in having elongate, slightly cuneate semicells, could be confused only with *I. longispinus* (BORGE) KRIEGER var. *amazonensis* FÖRSTER ex FÖRSTER, from which it is readily distinct in its stouter semicells (1.1 - 1.5 times longer than broad), and shorter cells (25.9 - 45.5 μ m long).

Shape of the semicells has been the basic feature for the erection of species in *Ichthyocercus*. Significant overall difference allied to constancy in the population sample studied warrants species level for *I. manauensis*.

The present four species of the genus can be identified according to the following:

1. Semicells tapered from base to apex.
2. Semicells oblong, with smooth lateral margins *I. angolensis*

2. Semicells suboblong to subcylindrical, with faintly and irregularly undulate lateral margins *I. humbertii*

1. Semicells not tapered from base to apex.
3. Semicells subcylindrical, widely divergent near the apex *I. longispinus*
3. Semicells cuneate, slightly divergent near the apex *I. manauensis*

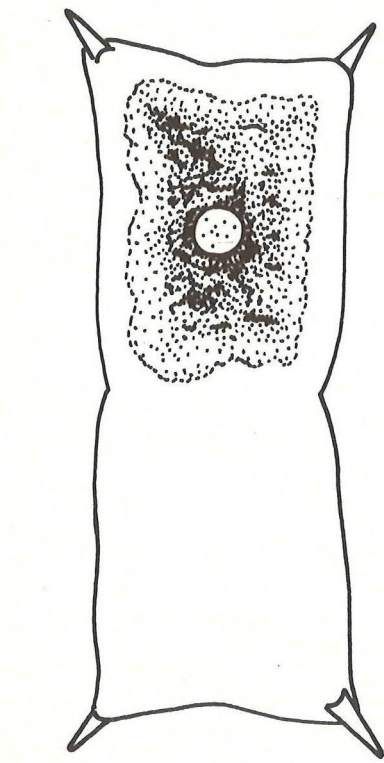
The population sample studied was very homogeneous with respect to the shape of the semicells. The sole variation observed was in the lateral margins of the semicells, which had for the most part a very shallow depression in the middle, but were often almost entirely straight or very slightly convex.

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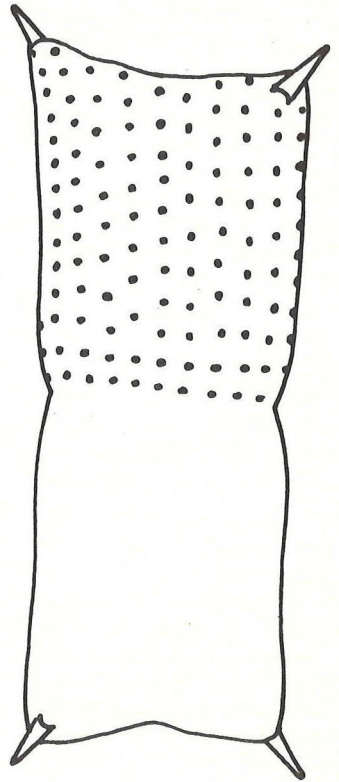
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1



2

10 μ m

Fig. 1 - 2:
Ichthyocercus manauensis C. BICUDO, sp. nov.